

Notice of Allowability

Application No.

09/977,251

Examiner

Thomas M. Ho

Applicant(s)

SIM, MYUNG SUB

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/16/2006.
2. ☒ The allowed claim(s) is/are 1-4,6-9 and 11-14.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 1/16/02, 10/18/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Art Unit: 2132

1. The response of 11/16/2006 has been received and entered

Reasons for Allowance

Applicant's arguments, see page 7, last paragraph – page 8 first paragraph, filed 11/16/06, with respect to claims 1-4, 6-9, and 11-14 have been fully considered and are persuasive. The rejection of 8/16/06 has been withdrawn.

According to Applicant's arguments, Van Stralen does not teach how the secondary decoding is performed.

“However, independent claim 1 recites secondarily decoding one of the primarily decoded signals stored in the memory according to a predetermined function, and storing the secondarily decoded signal in the same address as the address in which one of the primarily decoded signals was stored”

It appears to the Examiner that the Applicant by underlining “according to a predetermined function” is emphasizing that Van Stralen does not disclose this particular aspect of the claim.

The Examiner disagrees with this however for two reasons.

Art Unit: 2132

1) Any decoding can be construed as a predetermined function—even a decoder that does not change the input. For example $f(x) = A * 1$ is equivalent to the function $f(x) = A$. In this respect, any data transformation, or even a lack thereof would be understood by those of ordinary skill in the art to be performed in accordance to a predetermined function.

2) While Van Stralen does not explicitly recite the function of the second decoder, Van Stralen discloses that the turbo decoding mechanism is comprises of three basic functions: an alpha function, beta function, and gamma function. These functions are further defined in (Column 3, lines 1-45). One of ordinary skill in the art would interpret and understand that these functions would be employed in a primary turbo decoding, as well as a secondary turbo decoding. In this respect, the secondary decoding would again be performed in accordance with a predetermined function, or in this case three predetermined functions.

The Examiner however agrees with the latter part of the Applicant's arguments thereby agreeing as a whole that the limitation Applicant recites is not disclosed by Van Stralen.

The second limitation recites:

“storing the secondarily decoded signal in the same address as the address in which one of the primarily decoded signals was stored”

Art Unit: 2132

From figure 1, it is evident that the data from both decoders are stored in a common memory.

However, there is no explicit disclose or evidence that the decoding is stored in the same address as the address in which the (emphasis added) one of the primarily decoded signals was stored.

The alpha, beta, and gamma functions comprise the turbo decoding performed in Van Stralen.

These functions are calculated as recursive functions.

A recursive function is known to those in the art as a function that is computed in terms of itself.

The most commonly used example taught in first year computer science courses is the computation of the factorial function.

$F(n) = n!$ can be computed as

$$F(n) = n * f(n-1)$$

That is, the factorial of n is equal to the quantity n , times the factorial of $(n-1)$.

To find the factorial of $(n-1)$, the computer will then compute $(n-1) * \text{factorial of } (n-2)$.

Although these type of computations may be stored in a given variable, there is no explicit teaching, even by the recursive computational methods of the alpha, beta, and gamma functions that these values are stored in the same address of the data went in as the argument. Rather those of ordinary skill in the art would leave the storage of intermediate values or even final values computed by a secondary decoding mechanism in Van Stralen to a judicious memory manager.

Art Unit: 2132

For this reason, Claim 1 is allowable. Claims 6, and 11 additionally recite this limitation and are allowable for this reason.

Claims 2-4, 7-9, 12-14 are allowable because their independent claims are allowable.

2. Any inquiry concerning this communication from the examiner should be directed to Thomas M Ho whose telephone number is (571)272-3835. The examiner can normally be reached on M-F from 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571)272-3799.

The Examiner may also be reached through email through Thomas.Ho6@uspto.gov

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.

General Information/Receptionist Telephone: 571-272-2100 Fax: 571-273-8300

Customer Service Representative Telephone: 571-272-2100 Fax: 571-273-8300

TMH

February 4th, 2007

Application/Control Number: 09/977,251

Page 6

Art Unit: 2132



GILBERTO BARRON JR
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100